



L450CN Cyanide Analyzer

Liquid Analysis Systems' L450 series chemical analyzers perform dependable online wet chemical titrimetric analyses of most aqueous chemical species using pH, ORP, ISE, turbidimetric and other sensors. The L450 features are optimized for extreme reliability, ease of use, and minimum operating cost.



L450 Series Features

- Auto sample retrieval and preparation
- Result range and trend check
- Output options for recording, alarming, dosing, and/or replenishing
- Auto check of titrant, sample, and electrodes

Through its display and keypad, users can view process status and history, and modify analysis intervals and other configuration parameters. This series offers a variety of hardware options for stream selection, sample preparation, and sample/reagent delivery.

Series Options

- Multi-stream and multi-parameter analysis
- Standard precision titrant dose pumps with better than $\pm 3\%$ accuracy
- Grab sample port
- Replenishment and dosing systems
- RS 485/Ethernet networking/E mail messaging

L450CN Cyanide Analyzer

The online L450CN analyzer measures free or (optionally) total cyanide in water by means of a sensitive and accurate titration with silver nitrate. With the differential endpoint detection method, the internal Pt/Ag electrode does not require calibration or replacement, and electrode depletion and drift common with other methods is eliminated. No colorimetric dyes or indicators are required. For dependable process control, each analysis is automatically replicated and/or trend checked prior to posting, alarming, or replenishing. Sampling can be drawn from pressurized sample stream or pumped from overflow sampler. For sample with particulate, a sample strainer with automatic backflush is offered.



Analyzer Model	
L450CN	Base model with standard precision (10 µl) titrant dose pump, one sample/waste pump, single stream inlet, 4-20 mA output.
Options	
DI	Digital input for remote enable of analyses or dosing
DO	Digital output relay with settable trip point or other control function
EB	Ethernet server for remote monitoring via web browser
G1	Auto grab sample with sipper tube inlet.
MSx	Multi-stream sampling, x = number of streams.
R__x	Replenishment control (<u>R</u> elay or <u>P</u> neumatic output options)
SK__	Spares kit (basic or extended version)
SS	Sample inlet strainer with auto backflush.

Specifications	
Method	Differential titration with silver nitrate and Pt/Ag electrode. For total cyanide ammonium hydroxide is also added to release and detect cyanide bound to metals such as cadmium, zinc, and copper.
Ranges	Configurable over up to 50:1 range, e.g., 1 to 50 ppm CN
Repeatability	Settable: 3% of range, typical at 2 replicates. Setting drives number of replicates.
Interferences	Chloride at high concentration
Cycle time	3 to 12 minutes per stream, dependant upon span and repeatability settings
Equipment stability	Better than 1% / yr, excluding titrant stability. No user calibration required.
Reagent consumption	~100 µl/test, dependant on process value and range
Power required	100 to 240 VAC
Sample streams	Standard: 1 Optional: up to 4
Sample conditions	0 to 50 psig, < 25 µm particulate, 15 to 50 °C
Sample connection	In: 1/8" tube
Drain	1/2" tube connection.
Vent (to drain)	1/4" tube connection
Enclosure	20" H x 18" W x 10" D, wall mount, NEMA 4X/IP66
Display	3" x 2.2", LCD with backlight
Outputs	Standard: 4-20 mA process signal and analyzer maintenance alarm relay. Optional: alarm relay with settable trip point, Ethernet, and/or serial per user requirement

Table specifications subject to change.